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BANKIPORE CROSS-BRED CATTLE.

*Note by MR. N. N. BANERJEE, Assistant Director of Land Records and
Agriculture, Bengal,*

With extracts from reports received from—
Veterinary-Captain W. D. GUNN, Superintendent, Civil Veterinary
Department, Bengal,
Mr. E. C. MACNAGHTEN, Secretary, Bihar Indigo Planters' Association
Dr. J. W. LEATHER, Agricultural Chemist to the Government of India

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OXEN AND BUFFALOES.

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TOWARDS the close of the year 1856, just a few months before the
Indian Mutiny, Mr. Tayler, the then Commissioner of Patna,
started an Industrial Institution, for the establishment and mainten-
ance of which he raised funds by public subscription. In connec-
tion with this institution, he also started a small breeding establish-
ment, and maintained on it English bulls, pigs and sheep for
breeding purposes. From a report perused by me from the Com-
missioner's office, it would appear that four English bulls were
imported by Mr. Tayler, but one of these, which is described by
Mr. Tayler as a magnificent bull, purchased at a cost of Rs. 600,
seems to be the bull from which the present stock has been derived.
No information was forthcoming about the three other bulls which
seem to have been maintained on the Institution. The breeding

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establishment, and indeed the entire Institution, was placed by Mr. Tayler under English supervision, but it would appear, that owing to differences of opinion as to the expediency of the procedure adopted by Mr. Tayler in establishing and maintaining the Institution, it was soon closed. The Institution, including the breeding establishment, broke up on Mr. Tayler's transfer, after an existence of only a year or two. Subsequently, however, Mr. Tayler established practice as a pleader in Patna, and then recommenced his Farm work. His attention towards improving the breed of cattle in Patna, seems to have been given therefore both in his official and private capacity. From what I could gather from the *ahirs*,* the scheme at first did not receive their appreciation, for the simple fact that Mr. Tayler demanded too high a fee for each covering. The

The *ahirs* say that Rs. 20 was demanded for each covering, but I can hardly credit this.

N. N. B.

cross-breeding at the beginning was therefore confined to Mr. Tayler's Farm, and to some Europeans and wealthy native residents who could afford to pay his fees. The fees were, however, reduced with the second generation of cross-bred animals, and the local *ahirs* were then able to bring their cows to be covered by this second generation of cross-bred bulls. Two such bulls, I was told, were purchased by the *ahirs* themselves from Mr. Tayler at Rs. 80 each and used for breeding purposes. Nobody could specify the breed of the original English bull, but from the description given me, I would say, it was probably a Durham bull. The first generation of cross-breds is said to have inherited all the good points of the sire, but the progeny was found to degenerate gradually in every succeeding generation, owing, it is said, to proper want of care. I do not altogether participate in this view of the matter. It is probable, that sufficient care was not given to animals immediately before, during and after gestation, and it is also very probable, that from a desire to sell off milk to the best advantage, the calves were not allowed their full dole of milk; but then in the matter of housing and feeding, the greatest attention seemed to be given by the *ahirs* to their animals. I am inclined to attribute traces of inferior strain to the absence of fresh blood, and certainly in some cases to the tendency that cows have to "throw back," i.e., to give birth to inferior calves, when, in spite of their being put to a good bull they have previously been covered by an inferior bull. This last view is borne out by the fact, that the *ahirs* put their cows to the ordinary country bulls when cross-breds are not available for the purpose, the result being that when these cows are again put to good cross-bred bulls, their progeny is not of the same superior type as when there has been no contact with inferior stock. Though there has been a deterioration in the animals, I have to add, however, that, in spite of the fact that the present stock of cross-breds to be seen in Patna are distantly removed from fresh imported blood (being, according to the *ahirs*, of about the 20th generation), they still retain apparent traces of their superior origin, showing unmistakable signs of foreign blood in

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their make, shape, colour, size, &c. I would observe here, that my remarks apply to cows only. The cows I saw at Bankipore are the best I have seen in any part of Bengal, and may perhaps well compare with the cows of any part of India. They are good milkers—the best of them give quite 20 seers of milk, while even the poorest milkers do not yield less than about 8 seers of milk a day. The quality of the milk is also excellent. The good effects of cross-breeding are thus evident in the strain of cows. The same, however, cannot be said of the draught bullocks. Admixture of English blood has the tendency to make the animals too delicate for the Indian climate. With cows, this makes no difference, as care is taken to bring them into their stalls when hot, and to keep them in open air during the cool part of the day and at night. Draught bullocks, on the other hand, are found to succumb to the heat, and are not able to stand much outdoor work. The experiment in Patna thus clearly shows that cross-breeding with English bulls, though very good for improving the milking qualities of animals, is of no use for improving draught cattle. It is interesting to observe that such cross-bred bullocks are not appreciated by cultivators as draught animals on account of the absence of the hump, which, they say, is necessary for the yoke.

It will appear from the above remarks, that Mr. Tayler's work has resulted in improving milch cows, but has practically done nothing towards improving draught cattle. His experiment shows, that English bulls are not of much use in this country, as the chief object here is to get strong and hardy cattle for the plough, which will be able to stand the Indian sun, and not simply to have good milch cows, for which latter, the demand at best is but limited and confined practically to large towns and to wealthier people than ordinary cultivators.

In my opinion, if the agricultural stock of these Provinces are to be improved, bulls must be imported which can stand the Indian climate, and which would confer strength and powers of endurance to the progeny. The bulls must be sought for, in short, in India.

Extract from letter No 397^{P.D.}₃₆, dated 1st July 1895, from CAPTAIN W. D. GUNN, Superintendent, Civil Veterinary Department, Bengal.

I HAVE the honour to state that I also have been making enquiries with regard to that breed. As Mr. Banerjee has noted, the original idea of improving the breed of cattle was started in connection with the Bihar Industrial Institution. It was proposed to attach to it a farm where students might be instructed in agriculture. Before, however, the Institution was a year old—in fact, before the necessary buildings were completed, the money subscribed was returned to the subscribers, and the Institution closed. It would

CATTLE: seem that in order to stock the farm the following animals were purchased:—

	Rs.
1 magnificent hull, imported by Major Holmea	... 600.
2 English hulls from Mr. Boilard	... 380
1 English hull from Dr. Dickens	... 300
2 cows with calves from Dr. Dickens	... 300

It does not seem clear, that all these animals were taken possession of, for when the affairs of the Bihar Industrial Institution were being wound up, a letter, dated November 1857, states that "two hulls were not forthcoming," and in another letter it was stated that "two hulls were returned to the Bettia Raj by Mr. Tayler," the originator of the scheme. The Nawab Wilayet Ali purchased one of the hulls when the Institution collapsed. We, therefore, have left one bull, the *magnificent* one mentioned already, which Mr. Tayler took charge of when the farm premises were removed to the Kunkerhag House.

The fees proposed to be levied for the services of the bulls were 8 annas and 4 annas when the hulls belonged to the Institution farm, but possibly this charge might have been increased afterwards when the large hull became the property of Mr. Tayler, but certainly not to the extent of Rs. 20 for each service.

The present animals will probably be the tenth generation, allowing four years between the birth of calf and dam, and even the present animals show an undoubted likeness to the original animals. Indeed, I have two photographs of bulls which bear such a strong likeness to their progenitor, that they might readily be mistaken for Kerry hulls.

There is always a very large demand for milk, butter and *ghi*, and under these circumstances, I do not think Government could do better than to encourage this breed by lending or obtaining for the Patna Board or for Bankipore a good hull of the Dexter-Kerry breed.

I am aware, that the raiyats do not care for plough cattle which are deficient of hump, but it is not intended to utilize European bulls for other than milch cattle. For plough and cart-work, a judicious selection of indigenous Indian cattle will meet every requirement.

I am at present engaged in endeavouring to obtain the transfer of Brahmini hulls from Bihar (where there are more than enough) and have them placed in charge of responsible persons in Lower Bengal. For this purpose, I have interviewed Mr. Forbes, Commissioner of Patna, Mr. Hare, Collector of Muzaffarpur, and His Highness the Maharaja of Darbhanga, who have all considered the idea good and promised help. On account of the milking qualities, the *akirs* of Patna pay great attention to their cattle, so that this would be a most favourable place to start, or rather

continue, the experimental breeding, and I would therefore strongly recommend that two or three bulls of the Dexter-Kerry breed be imported, and that at least one be stationed at Patna or Bankipore,

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Extract from a letter, dated 4th July 1895, from Mr. E. C. MAC-NAGHTEN, Secretary to the Bihar Indigo Planters' Association.

I THINK that, to a certain extent, Mr. Banerji has overlooked the importance of the "ghi" trade, which is certainly not confined to large towns. Anything that tends to increase the milking qualities of cows must be good for the country, and I have never found any difficulty in using cross-bred bullocks in the plough or cart. *Buffaloes have no hump. I have also found that cross-bred bullocks work well in the sun; they walk faster than country cattle, and do heavier work, though naturally, having to do this and being heavier framed, they may feel the sun more than light country cattle doing less work. The curse of the country is the number of weedy bulls that are left loose annually, and no selection is made by cattle owners as to what bull shall serve their cows. It is literally a case of "first come first served."

Cattle, in these districts, are degenerating yearly; new blood is badly wanted, and I myself would prefer English or half-bred bulls. If a few bulls were sent to Muzaffarpur, I would be pleased to look after them and to encourage cultivators to use them for their cows.

Extract from a letter No. 477, dated 29th January 1895, from Dr. J. W. LEATHER, Agricultural Chemist to the Government of India.

Improvement in cattle.—That the cattle around Tikari are diminishing there can be no doubt, and it is not difficult to point to breeds of cattle in other parts of India which are far superior to them.

¶When, however, one raises the question as to which breed would be the best to introduce, we find objections certainly to some. For example, the large Hissar cattle are as fine as any in India. There are also the Mysore and the Nellore cattle, both of which are excellent. But they are all large cattle, and will require more food than the little beasts at present in use. Would they, or any of them, do more work than the indigenous ones, so as to pay for their feed? Again, will they stand the climate, and, more particularly, the ploughing of rice fields when under water? A definite answer to these questions can only be obtained by trial.

The most usual method of improving the breed of cattle in India, which has been tried, has been to keep a stud-bull for serving any cows that the cultivators may choose to bring, there being generally

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a nominal charge. It is a method which is simple of application, and I certainly think that something of the sort might be adopted at Tikari.

But if anything is done, it occurs to me that, in the first place at any rate, an attempt should be made to apply the process of "selection," i.e., one or two of the best bulls to be found in Bihar should be bought and kept for breeding purposes, rather than the institution of rash experiments with large cattle. If this were done, and the selected bulls well fed and kept in light work, it would soon become apparent whether improvement of the indigenous breed could not be attained.

I may, before leaving this part of the subject, refer for a moment to what, I understand, is known at Gaya as the "Patna" breed. It is a cross between the English "short horn" and the local breed. I saw several of these at Gaya. They are called "short horns," and are considered good milkers. They are a very degenerate beast, with straight back and without the "bump," in some cases, good milkers, but, at least in the case of all that I saw, small sized (about 3½ or 4 feet) and with poor, weakly horns, a sure sign of poor breeding. If they are better milk-yielders than the local breed, they are no good as breeders for plough bullocks, and they form, to my mind, not at all a desirable breed to propagate.

If the people of Gaya saw a real "short horn" cow they would at once admit the degeneracy at which this cross has arrived,

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